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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,029	09/19/2001	Kazunobu Katoh	2870-0174P	8315

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EXAMINER

CHEA, THORL

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 05/05/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/955,029

Applicant(s)

KATO, KAZUNOBU

Examiner

Thorl Chea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18, 20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18, 20 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of EP 083764 (EP'764), Deroover et al ('263) and Komamura.

EP'764 discloses a photothermographic material substantially as claimed. The material contains hydrophobic, thermoplastic organic binder, silver halide, silver salt of an organic acid and reducing agent. Note especially the thermoplastic resin on pages 4-5 and pages 43-44. The material also contains a surface protective layer, intermediate layer, and antihaltion layer; the binder used in the non-photosensitive layers may be gelatin, polyvinyl alcohol or polymer latex as described in the first embodiment (page 25, lines 5-10).

Deroover discloses the use of heat-solvent which is in solid state in the recording layer at temperature below 50 deg. C, but become plasticizer for recording layer in the heat region and/or liquid solvent for at least at least one of the redox-reactant, e.g. the reducing agent for the organic heavy metal salt, at a temperature above 60 deg. C. See especially Deroover in column 11, lines 1-14. Deroover in column 12, lines 40-45 discloses the use of hydrophobic binder in protective layer in column 16 lines 20-50

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discloses the antihaltion layer containing hydrophobic binder; in column 17, lines 1-40 discloses the use of polyethylene wax in combination with latex in antihalation layer.

Komamura discloses the thermal solvent in column 23, lines 24-31 which can be incorporated in various layers such as light sensitive silver halide emulsion layer, intermediate layers and protective layer. The thermal solvents are usually incorporated in an amount ranging from 10 to 500 %, preferably 30 to 200 % of the binder (column 23, lines 30-31). See also column 23, lines 10-31 which discloses " particularly useful compounds are: urea derivatives (e.g., dimethylurea, diethylurea and phenylurea), amide derivatives (e.g., acetamide, benzamide and p-toluamide), sulfonamide derivatives (e.g., benzenesulfonamide and .alpha.-toluenesulfonamide), and polyhydric alcohols (e.g., 1,6-hexanediol, 1,2-cyclohexanediol and pentaerythritol, and polyethylene glycol.

EP'764 differs from the claimed material in its failure to disclose the heat-fusible solvent in combination with hydrophobic, thermoplastic organic binder in a layer other than image forming layer; but the use of the hydrophobic, thermoplastic binder in a layer other than image forming layer such as protective layer or antihaltion layer has been known in EP'764 and Deroover. Deroover discloses the use polyethylene wax which having similar property to thermal solvent in the antihaltion layer. Komamura in disclose the thermal solvent of the claimed invention various layers of a thermally developable material such as light sensitive silver halide emulsion layer, intermediate layers and protective layer. The thermal solvent behaves similarly when incorporated in photosensitive layer or any layer other than the photosensitive layer, which is capable

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of accelerating thermal development and/or heat transfer. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the heat solvent taught Kamamura in combination with hydrophobic binder in a layer other than image forming layer of the material of EP'764 to accelerating thermal development and/or heat transfer, and thereby provide the invention as claimed.

### ***Response to Arguments***

3. Applicant's arguments filed March 05, 2003 have been fully considered but they are not persuasive. It is the Examiner's position that the claimed invention would have been found obvious to the worker of ordinary skill in the art. The gist of the claimed invention is the use of a specific thermal solvent such as urea derivatives, amide derivatives, sulfoamide derivatives, polyhydric alcohols and polyethylene glycol in combination with hydrophobic and thermoplastic, organic binder in a layer other than the image forming layer. It has been known in the applied prior art of record to use hydrophobic binder and thermal solvent in a layer other than image forming layer such as provided in the rejection above, and the claimed invention would have been found prima facie obvious over the applied prior art of record. The rejection above is based on the combination of the applied prior art of record. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The worker of ordinary skill in the

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art would use thermal solvent in any layer of a photothermographic material with an expectation that the thermal development and/or heat transfer would be accelerated.

The argument with respect to the unexpected results is not persuasive. First, the argument with the unexpected results is based on the Counsel's assertion. Counsel's arguments cannot take the place of evidence. In re Greenfield, 571 F. 2d 1185, 197 USPQ 227 (CCPA 1978). Second, the results presented in the specification disclosure are not relevant to the material of the applied prior art of record, namely EP'764. Third, the results are not commensurate with the scope of the claimed invention. The comparative samples contains a variety of additive such as nucleating, antifoggant and more, while such additives are not included in the claimed invention. Fourth, the criticality of the use of the combination of the hydrophobic, thermoplastic binder with thermal solvent in a layer other than image forming layer has not been demonstrated.

#### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (703)308-3498. The examiner can normally be reached on M-F (9:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet C Baxter can be reached on (703)308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9301 for regular communications and (703)872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

tchea   
May 2, 2003

  
Thorl Chea  
Primary Examiner  
Art Unit 1752